

Work Order ID 128196

January-12-15 1:52:31 PM

48.9711
128196
BVC

128196

Page 1

Item ID: 646.9711

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Blade

Start Date: 1/12/15

Start Qty: 50.00

50

Cust Item ID:

Required Date: 1/23/15

Req'd Qty: 50.00

50

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

646.9700

C (ECN)

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blank at 4.625"

50 0 *15/01/16*

110

0.00

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine per folio FB135

DWG REV: C

FOLIO REV: A

15/01/17

50 0 **DAS 37 9-29** 15-0120

2- deburr and break all sharp edges except otherwise noted

KNIFE EDGE MUST BE SHARPENED USING STONE, REMOVE ALL BURRS ON CUTTING EDGE

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Item ID: 646.9711 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Blade
 Start Date: 1/12/15 Start Qty: 50.00 ***50*** Cust Item ID:
 Required Date: 1/23/15 Req'd Qty: 50.00 ***50*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.00				50	Ø		
Quality Control									
130	QC8- Inspect parts - second check	0.00							
130									
QC	Memo	0.00				50	Ø		DAS 40 9-89
Quality Control									15/01/21
140	Outsource process - Heat Treat	0.00							
140									
Outsource1	Memo	0.00							
Outsource process - Heat Treat	HEAT TREAT AS PER DWG, SEE NOTE #3								
	ISSUE P/O: <u>27197</u>								

Handwritten notes:
 15/01/17
 15/01/21
 15/01/23 50

Work Order ID 128196

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Item ID: 646.9711 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Blade
 Start Date: 1/12/15 Start Qty: 50.00 ***50*** Cust Item ID:
 Required Date: 1/23/15 Req'd Qty: 50.00 ***50*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Insp for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.00							
Quality Control									
160	Spray Painting per QSI005 4.2	0.00							
160									
SprayPaint	Memo	0.00							
Spray Painting	PRIME AS PER DWG, SEE NOTE #4								
	PRIMER BATCH: <u>131121</u>								

50X 2015-02-5

50

DAS
38
9-89

FEB 05 2015

50

DAS
41
9-89

15-2-8

Work Order ID 128196

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Item ID: 646.9711

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Blade

Stop *NS2*

Start Date: 1/12/15 Start Qty: 50.00

50

Cust Item ID:

Required Date: 1/23/15 Req'd Qty: 50.00

50

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC14- Inspect Spray Paint	0.00							
170									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: <u>MP</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

50

DAS
38
9-89
FEB 24 2015

50 DAS
86
9-89

FEB 26 2015

MCJ 1502-26

MF
15-2-26

Picklist Print

January-12-15 1:52:31 PM

Page 1

Work Order ID: 128196

128196

Parent Item: 646.9711

646.9711

Parent Item Name: Blade

Start Date: 1/12/15

Required Date: 1/23/15

Start Qty: 50.00

Required Qty: 50.00

Comments: IPP REV:A NEW ISSUE 12/09/24 JFS VERIFY BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MSTEEL-A2- B0.500X1.250		Purchased		No		100	f	73.0000	0.386	21			

MSTFFI -A2-B0 500X1 250

SAISI A2 TOOL STEEL BAR, 0.500 X 1.250

W.P.
15/01/16

Location

Loc Qty

Loc Code

MAT010

73

M126438

71.6

M127494

1.4

19,975'

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04559

SHEET 1 OF 1

DWG NO. 646.9700

REV: C

PREPARED BY D. MEJIA

DATE: 06/11/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY: ENGR

[Signature]

MFG

[Signature]

QC

[Signature]

EFF.

NEXT ORDER

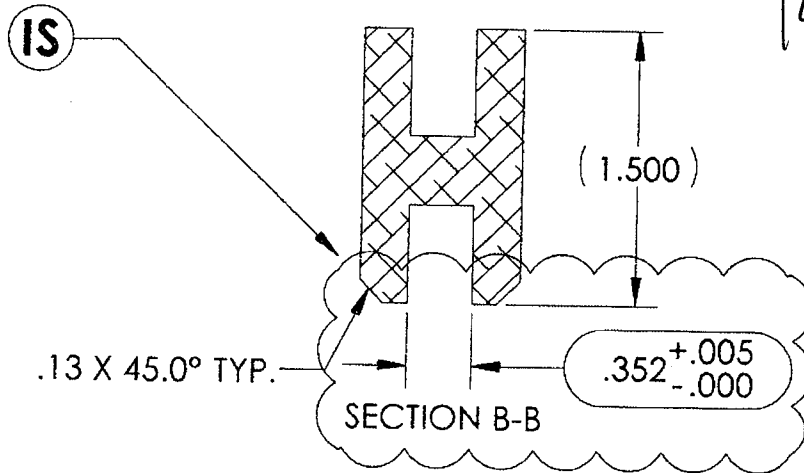
TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED DIMENSION AND TOLERANCE

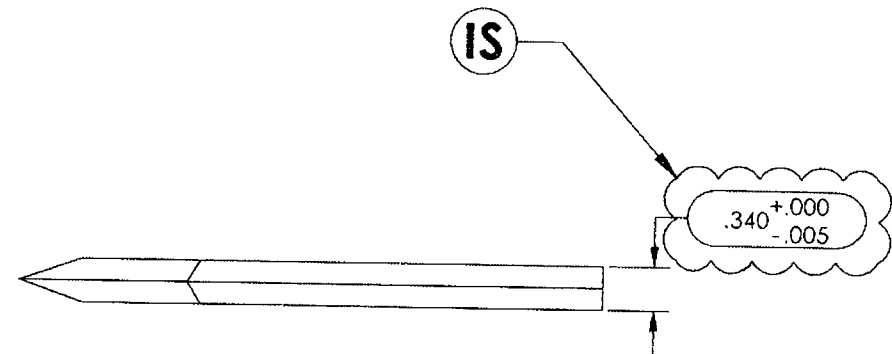
ECR:

D-14-05

SHEET 2, ZONE D7 IS:



SHEET 5, ZONE B5 IS:



DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

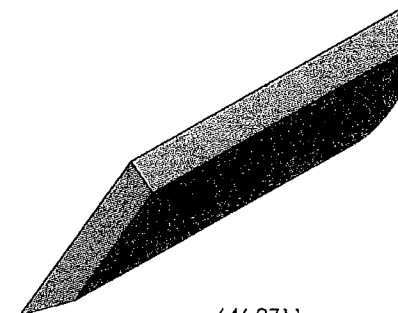
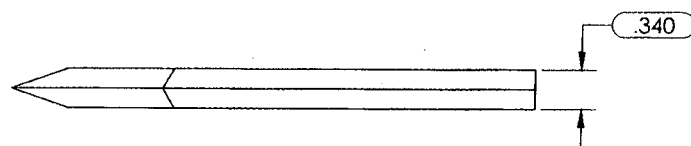
CHANGE CATEGORY

☐ MAJOR ☒ MINOR

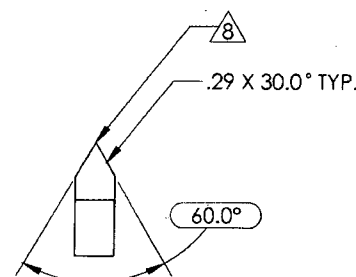
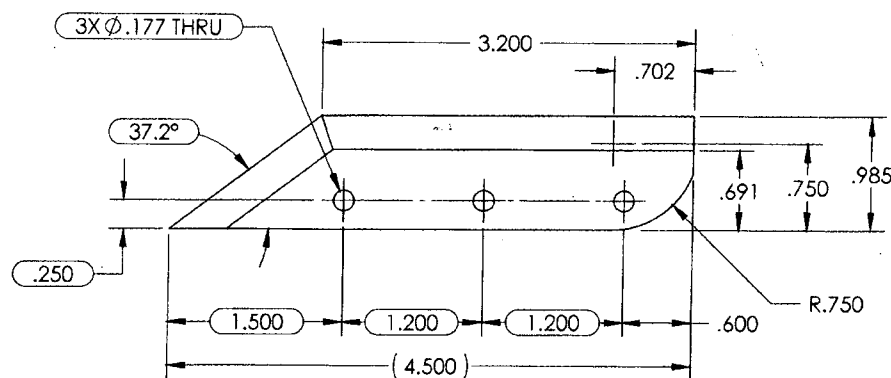
DER REVIEW REQUIRED

☐ YES ☒ NO

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646.9711



646.9711

ORIGINAL DATE 05-29-89		APICAL INDUSTRIES	
DRAWN BY N. POKSANG	CHECKED BY J. BRAND	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BRAND		CUTTER SUB ASSY	
SCALE CONTRACTING NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONS ARE 2 PLACE DECIMALS ± .01 ANGLES ± .5°		SHEET B	REV. C
		CAGE CODE 07ME6	UNQ. NO. 646.9700
		SCALE NONE SHEET 5 OF 6	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO27197**

Purchase Order Date 1/23/2015

PO Print Date 1/23/2015

Page Number 1 of 2

Order From :

VC-MET004

Ship To : DART AEROSPACE LTD

METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 450 473 1884

Ship To Contact

Ship To Phone

Ship Via: FedEx PI collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	128196	646.9711 BLADE	1/30/2015 Yes 1/30/2015		50.00 ✓	\$0.00	\$0.00
	FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS						
	PART ARE MADE FROM AISI A2 TOOL STEEL						
	PLEASE NOTE: DETAIL C OF C REQUIRED						
					8015-025		
					Line Total:		
							\$0.00
2	71401-45	PROCUREMENT QUALITY CLAUSES	1/30/2015 No 1/30/2015		1.00	\$0.00	\$0.00
	Procurement Quality Clauses						
	A005 right of entry						
	A012 chemical and physical test report						
	A020 non-destructive test/inspection identification						
	A021 dart aerospace processing						
	A024 process certifications						
	A026 certification of material conformance						

Note:

1/23/2015

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
202228	1	88041

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
27197		A2	2015/1/26	fed

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
----------------------	-------------------------	--------------------------------	---	-----------------

✓ 50 71401-45 14,
(50) 646.9711 BLADE 128196

1 BOITE D ECARTON

501502-5

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
BOITE DE CARTON	1	

CERTIFICAT

EMPAQUETAGE Packing	
------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 50

POIDS EXPÉDIÉ / Weight Shipped : 14,00

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

CERTIFICAT

QUANTITÉ EXPÉDIÉE / Quantity Shipped: 50

POIDS EXPÉDIÉ / Weight Shipped : 14,00

Signature:

Date:

EXPÉDIÉ LE / Shipped On : 2015/01/29

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Rapport d'Inspection**Inspection Report**

BON DE TRAVAIL order	CHARGEMENT load
202228	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

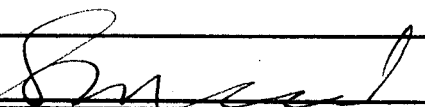
ON K8A 1K7

COMMANDE DU CLIENT customer po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
27197		A2		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed RÉSULTATS DE TESTS / results				
HARDNESS		58 - 62 HRC	5	58 - 60 HRC
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
50	14	71401-45 (50) 846.9711 BLADE 128198 1 BOITE D ECARTON		

SP15-02-5
6 FBL

COMMENTAIRES / comments

APPROUVÉ par / Approved by:




DATE: 2015-01-29

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
202228	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
27197		A2		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	58 - 62 HRC	5	58 - 60 HRC	
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
50	14	71401-45 (50) 646.9711 BLADE 128196 1 BOITE D ECARTON		

SP15-02-5

COMMENTAIRES / comments

VAC HARDEN 1800F, 1:30 HR
DOUBLE TEMPER 400F, 2 HRS

Heat treatment (HT) was performed with equipment that meets the requirements of requested specification. All HT operations were performed in compliance with the required HT specification and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec la spécification demandée. Toutes les opérations de TT ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

APPROUVÉ par / Approved by:

Isabel Otero

Isabel Otero

QA Technician



12

DATE: 2015-01-30